WHAT I CLAIM IS :

1. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, the spar mounting wing sheets forming flying surfaces, whereby during rotation of the wing sheets the said spar can flex without transmission of flexural movement to the wing sheets,the said spar mounting a rotatable transverse rib and a power transmission means coaxially fixed together for axial rotation about said spar, the said transverse rib comprising generally spanwise rib means oppositely fixed to it and extending within a portion of the wing sheets and detached from said wing sheets.

2. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, the said spar mounting wing sheets forming flying surfaces rotatable about its span axis, whereby during rotation of the wing sheets the said spar can flex without transmission of flexural movement to the wing sheets, the said spar mounting a transverse rib and a drive means adapted to be fixed together for axial rotation about the spar, the transverse rib comprising generally spanwise rib means extending within a portion of the said wing sheets, the wing sheets sliding on said spanwise rib means, the said rib means engaging the wing sheets such that axia rotation of said drive means is transmitted to said wing sheets.

3. An assembly according to Claim 2, the power driving the said spanwise ribs being not applied to them from within the wing sheets.

4. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, and wing sheets forming flying surfaces and mounted upon a frame including said spar, whereby during rotation of the wing sheets the said spar can flex without transmission of flexural movement to the wing sheets, the spar mounting a rotatable transverse rib adapted to receive power transmission through a drive means fixed to said transverse rib for axial rotation about said spar, the said transverse rib carrying opposed rib means extending generally spanwise within a portion of the said wing sheets, the wing sheets sliding upon the said rib means, the said rib means engaging the wing sheets such that axial rotation of said drive means is transmitted to said wing sheets, the said transverse rib and the said rib means constituting a structure independent from the frame, the wing sheets being driven by a structure bringing no contribution to the wing sheets structural strenght.

5. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, the spar flexing and crossing its axis and mounting wing sheets forming flying surfaces rotatable about its longitudinal axis without transmission of flexural movement to the wing sheets, and rib means adapted to be fixed to a drive means rotatable about the spar,

the said rib means extending generally chordwise from opposite sides of the spar and forming an angle in the plane of the wing to extend generally spanwise to engage a portion of the wing sheets such that axial rotation of the said drive means can transmit rotation to the wing sheets through a relative movement between the said rib means and the said wing sheets, wherein the wing sheets undergo limited movement in the plane of the wing relatively to said rib means while the said rib means are relatively fixed in the said plane.

6. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, and wing sheets forming flying surfaces and mounted upon a frame including said spar, whereby during rotation of the wing sheets the said spar can flex without transmission of flexural movement to the wing sheets, the spar mounting a rotatable coaxial drive means adapted to include rib means oppositely fixed to it and extending generally chordwise and forming an angle in the plane of the wing to extend generally spanwise within a portion of the said wing sheets, whereby the wing sheets can slide relatively to said rib means, the said rib means engaging the wing sheets such that axial rotation of said drive means is transmitted to said wing sheets, whereby the frame does not transmit rotation to said rib means.

7. A rotary wing assembly for an aircraft, said assembly comprising a spar intended to be mounted upon an aircraft fuselage, and wing sheets forming flying surfaces and mounted upon a frame including said spar, the spar flexing and crossing its axis and mounting

said flying surfaces rotatable about its longitudinal axis without transmission of flexural movement to the wing sheets, the said fuselage comprising an engine, the spar mounting a rotatable transverse rib adapted to receive engine power from the said engine through a power transmission means coaxially fixed to the said transverse rib, the said transverse rib comprising generally spanwise rib means oppositely fixed to it and extending within a portion of the wing sheets and detached from said wing sheets and positioned such that rotation of said transverse rib is capable to drive the wing sheets, the said engine being capable to transmit power to the surface of the wing sheets without transmitting it to the frame.

8.An assembly according to Claim 2, the said rib means being fixed to the said transverse rib in position suitable for engaging the wing sheets while allowing the relative movement between the wing sheets and the frame.

9. An assembly according to Claim 1, the said flying surfaces including longitudinal edges, the said spanwise ribs being mounted at a chordal distance between them such that they keep clear from the said longitudinal edges and the wing sheets are able to angle in the chordal plane while the spar has reached its maximum flexion.

10. An assembly according to Claim 4, the said flying surfaces including a root chordal edge, wherein a chordal clearance in the plane

of the wing between the said transverse rib and the said chordal edge is maintained such to accomodate the angling of the said chordal edge during the 360° of angular rotation of the said flying surfaces.

11. An assembly according to Claim 4, wherein the said rib means driving the wing sheets are positioned not in a chorwise direction.

12. An assembly according to Claim 2, the said spanwise ribs mounting coaxial tubes capable to turn about them, wherein the said tubes engage the wing sheets such to transmit rotation to the said wing sheets while being able of rolling on the said wing sheets during the limited movement between the said spanwise ribs and the said wing sheets.

13. An assembly according to Claim 2, the said spanwise ribs transmitting rotation to the wing sheets being not fixed to the spar and not rotated by the spar.

14. An assembly according to Claim 7, the said spanwise ribs being independent from the spar flex.

15. An assembly according to Claim 6, the axial rotation to the wing sheets being not transmitted through a relative movement between the wing sheets and frame means, wherein the said rotation is trans-

mitted through a relative movement between the wing sheets and rib means not constituting part of the frame.

16. An assembly according to Claim 5, wherein the spar has no drive means fixed to it.

17. An assembly according to Claim 7, the chordal distance between said rib means being suitable for engaging the wing sheets and drive them for axial rotation while not hindering the relative movement between the wing sheets and the frame.

18. An assembly according to Claim 7, the rotation being not transmitted to the wing sheets by the wing sheets of an adjacent flying surface with an autonomous assembly to achieve the flexing of the spar.

19. An assembly according to Claim 7, the power being transmitted only to the root portion of the wing flanking the fuselage.

20. An assembly according to Claim 2, the said transverse rib and the said drive means being mounted at the opposite ends of a tube section coaxial with the said spar such that a chordwise clearance between them is maintained.